Sale Name: Roadway First Thinning

KT-GT.9# - STEWARDSHIP PROJECTS

Project Number 001: Road Restoration

Road Restoration work on 1.65 miles of National Forest System Road (NFSR) 339 will consist of:

Description	Unit	Quanity
Furrow Lead-off Ditches	Linear Foot	**30**
Road Recondtioning, Ditching right & left	Linear Foot	**3,000**
Linear Grading	Mile	**0.57**
Placing Riprap, class 30 in lead-off ditches	Ton	**275**
Placing Aggregate surfacing, course grading R, compaction method A	Ton	**1200**
Seeding and fertilizing	Acre	**0.1**

All locations will be staked by Construction Inspector (CI) prior to starting work. Work will begin at station 57+00 and end at station 87+00.

Work is to be completed in the following order: furrow ditches, road reconditioning, placing riprap, placing aggregate, grading, and seeding/fertilizing.

FURROW LEAD-OFF DITCHES

This work consists of reshaping 10 lead-off ditches and reconstructing 1 lead-off ditch.

Lead off ditches designated by the Contracting Officer shall be cleaned and reshaped to provide drainage away from the roadway. Material excavated from lead off ditches shall not be reclaimed onto the roadway.

ROAD RECONDITIONING, DITCHING RIGHT and LEFT

This work consists of reconditioning ditches, shoulders, roadbeds and aggregate surfaces.

Ditches shall be shaped as shown on the Typical Section Drawing (Fiqure 1), unless otherwise directed by the Contracting Officer. Drainage structures and road appurtenances shall not be damaged during this operation. Handwork required to properly connect ditch flow lines to drainage structure inlets is considered a part of this activity.

Within the ditch, all suitable material, having the same character as the road surface, excavated through this activity shall be reclaimed and used within the riding surface. Unsuitable material shall be spread along back slopes or fill slopes to assure road surface drainage and prevent unsuitable material from being pulled onto aggregate surfaces. Following this work, the riding surface shall be graded in accordance with specification listed below.

PLACING RIPRAP

This work consists of placing 275 tons of class 30 riprap scattered evenly through-out all lead-off ditches to slow runoff and prevent erosion.

	Individual Stone Weight	% by Weight
Class 30	5-24	20-40

AGGREGATE SURFACE

This work consists of placing 1200 tons of course R grade aggregate on the roadbed. The work includes preparation of the existing surface, furnishing, loading, hauling and spreading specified aggregate material, compacting and finish grading.

Remove, by cutting out, all damaged areas of surface, and work new material smoothly over the entire riding surface width.

Grading R:

Sieve Size	Percent Passing
2 inch	90-100%
1 inch	20-100%
No. 4	0-65%

Compact each layer full width. Roll from sides to the center, parallel to the centerline of the road. The compaction method to use all construct epuipment and gravel trucks traveling back and forth on roadway to compact.

LINEAR GRADING

Grading operations shall be conducted over the entire riding surface for 0.57 mile in order to remove, by cutting out, all ruts, potholes, corrugations and berms. All suitable dislodged aggregate shall be smoothly redistributed over the entire riding surface to produce the proper cross slope or crown. Road structural terms are illustrated on the Typical Section drawing (Figure 1). The road center line shall be the high point of the roadbed and have a crown sloping down at 2 % to the road shoulder or ditch. Aggregate surfacing which has been worked onto road shoulders by traffic or maintenance activities shall be reclaimed and smoothly redistributed over the entire riding surface. Riding surface widths shall be perpetuated as existing.

Dips and swales designed to control surface drainage shall be maintained. No undercutting of road surface nor material berms will be allowed. Assure proper surface drainage after all operations. Usual amounts of grass, leaf litter or pine straw shall be smoothly spread within the riding surface after movement sufficient to sift out surface aggregate. Where grass, leaf litter or pine straw is excessive, as determined by the Contracting Officer, this material will be piled in spots along the road shoulder and left to decay. Care shall be taken that this material does not interfere with surface drainage.

Blading operations shall be conducted as required to prevent accumulation of surface material and debris on concrete bridge decks. Care shall be taken not to damage any part of the bridge. All suitable material shall be smoothly redistributed over the riding surface at bridge approaches.

Care shall be taken to avoid blading any surface material into cattleguards. Any material deposited in cattleguards as a result of the Contractor's operation shall be cleaned out at the expense of the Contractor.

Loose rocks protruding three inches or more above the graded surface shall be removed. It is permissible to waste these rocks off the riding surface away from drainage ditches.

SEEDING and FERTILIZING

This work shall consist of preparing seedbeds, and furnishing and placing required seed and fertilizer. Seed and fertilizer shall be applied with approved mechanical seeding equipment such as seed drills, landscape seeders, cultipacker seeders, fertilizer spreaders or hand-operated seeders. Areas to be seeded shall be disked to a minimum depth of two inches prior to application. Seed and fertilizer shall be applied separately, with fertilizer being applied first. Both shall then be incorporated by dragging.

Fertilizer

Fertilizer shall be homogenized or blended, and shall provide the following minimum percentages of available nutrients - 13% Nitrogen, 13% Potash and 13% Phosphorus. It shall be furnished in new, clean, sealed containers with the name, weight and guaranteed analysis of contents clearly marked. It shall be applied uniformly at 500 pounds per acre.

Seed

Seed shall be furnished separately or in a mixture in standard sealed containers with (1) seed name, (2) lot number, (3) new weight, (4) percentages of purity and of germination, and (5) percentage of maximum weed seed content clearly marked for each kind of seed.
Seed shall meet the requirements of Fed. Spec. JJJ-S-181B. Seeding shall be performed in accordance with the applicable seasonal schedule and rates as follows:

Kisatchie National Forest Seeding Specifications

Summer (April-Sept)	Bulk rate in lbs./acre (PLS)††	Mixed rate in lbs./acre
brown top millet	35-45	10
common carpet grass	25-35	2.5
cow peas - var. Iron and Clay†	25-35	5
grain sorghum	20	3
partridge pea	10-13	3
pearl millet	25-30	5

Winter (Oct-Mar)	Bulk rate in lbs./acre (PLS)††	Mixed rate in lbs./acre
austrian winter peas†	30	4.5
cereal rye	90-120	9
cow peas - var. Iron and Clay†	25-35	2.5
oats	100-120	20
wheat	60-120	20
white clover (osceola or durana)†	3-5	2

Critical Erosion Areas (areas of concern due to slope)

Summer/ Winter	Bulk rate in lbs./acre (PLS)††	Mixed rate in lbs./acre
Bahiagrass	15	3
Bermudagrass	5	1
brown top millet	35-45	15
common carpet grass	25-35	2.5
ryegrass (annual)	20-30	10
white clover (osceola or durana)†	3-5	2

†Innoculate all legumes and clovers (except for Partridge Pea)

†† PLS = pure live seed

For ryegrass and clovers, prefer to be topseeded and cover very lightly

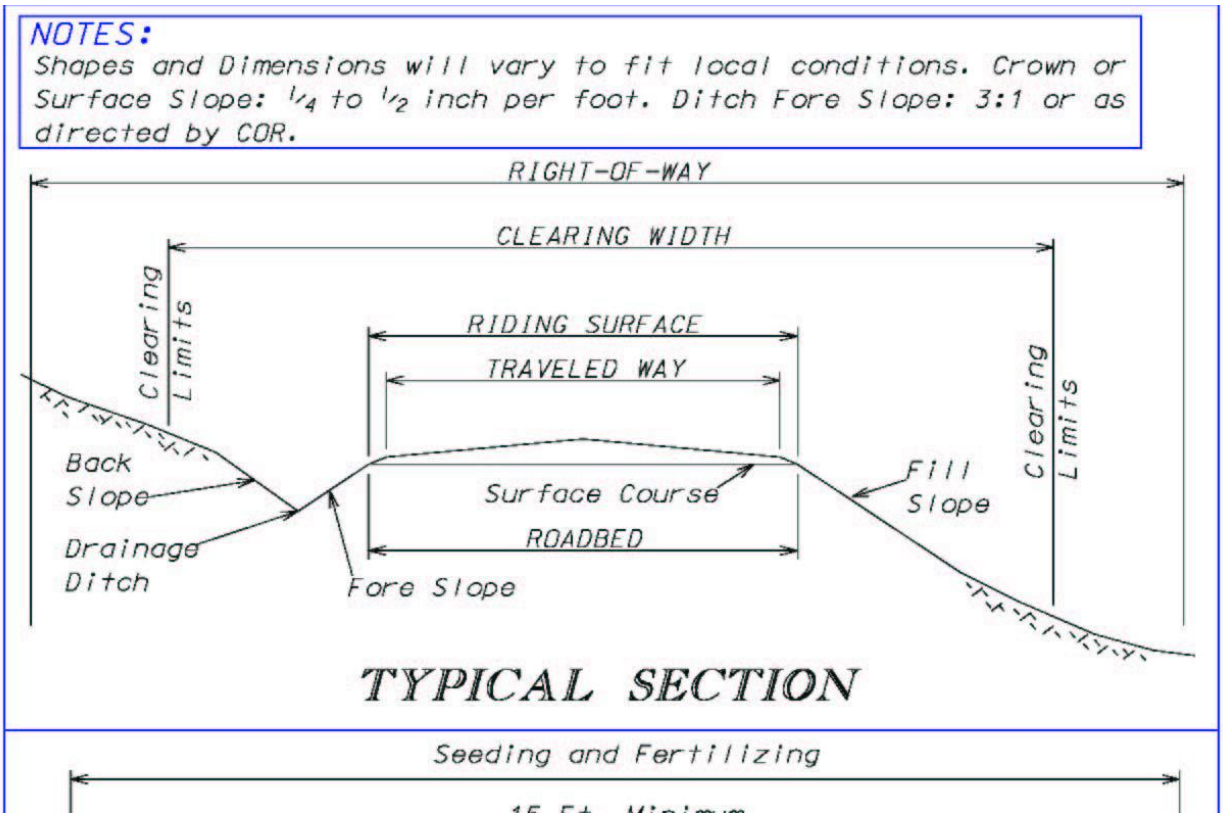

Figure 1. Typical Section Drawing